USGS
science for a changing world

Earthquake Shaking — Green Alert

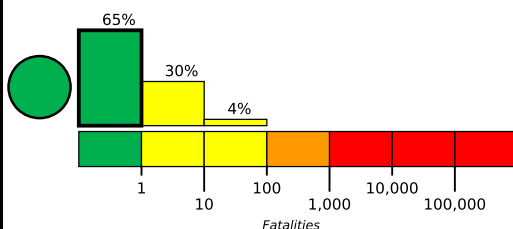GSN   USAID FROM THE AMERICAN PEOPLE

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PAGER
Version 4

M 5.5, 8km ENE of Kulaman, Philippines

Origin Time: 2019-06-05 20:41:49 UTC (Thu 04:41:49 local)
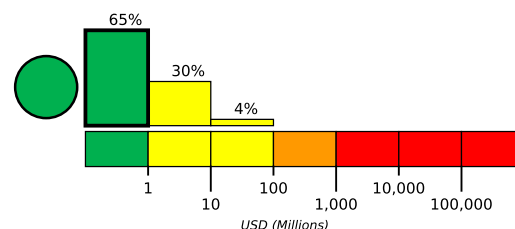Location: 6.4856° N 124.1655° E Depth: 466.1 km

Created: 1 day, 0 hours after earthquake

Estimated Fatalities

65%
30%
4%

1   10   100   1,000   10,000   100,000
Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.
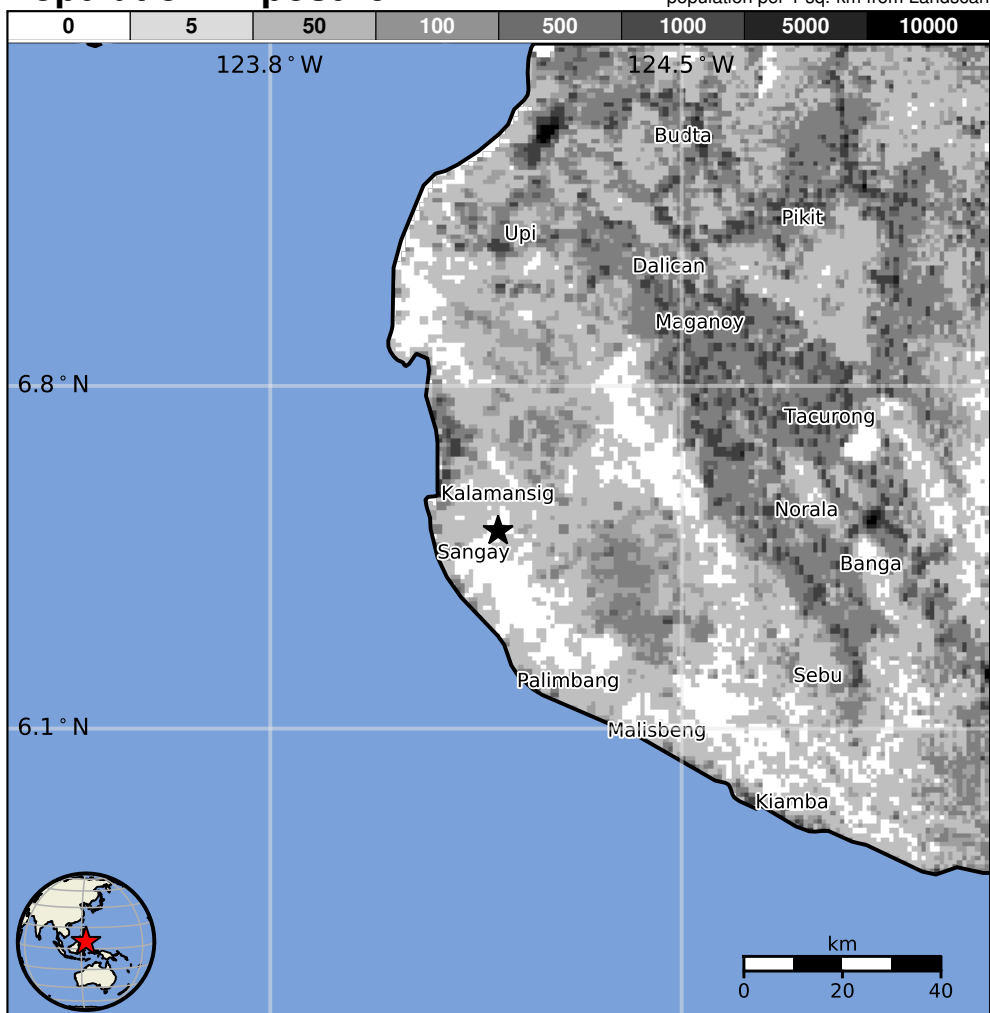
Estimated Economic Losses

65%
30%
4%

1   10   100   1,000   10,000   100,000
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		5k*	4,264k	0	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

| 0 | 5 | 50 | 100 | 500 | 1000 | 5000 | 10000 |

Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are unknown/miscellaneous types and heavy wood frame construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1987-05-23	224	5.7	VII(70k)	1
1990-02-08	368	6.7	VIII(96k)	1
2002-03-05	52	7.5	VIII(12k)	15

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
II	Villamor	2k
II	Matiompong	2k
II	Laguilayan	18k
II	Lapuz	3k
II	Lebak	<1k
II	Liberty	3k
II	Malingao	1,122k
II	**Budta**	**1,274k**
II	Cotabato	179k
II	Koronadal	126k
II	**Banga**	**59k**

bold cities appear on map.   (k = x1000)